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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,502	02/07/2006	Hiroyuki Tomizawa	60303.56/ok	1114
54/070 7590 04/02/2008 HITACHI METALS, LTD. C/O KEATING & BENNETT, LLP 8180 GREENSBORO DRIVE SUITE 850 MCLEAN, VA 22102				
EXAMINER SHEEHAN, JOHN P				
ART UNIT 1793		PAPER NUMBER		
NOTIFICATION DATE 04/02/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM
uspto@kbiplaw.com

Office Action Summary

Application No.

10/567,502

Applicant(s)

TOMIZAWA ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CS-100)
Paper No(s)/Mail Date 2/7/2006 7/19/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings filed on May 16, 2005 are accepted by the Examiner.

Specification

3. The Examiner has approved the substitute specification filed February 7, 2006 and it has been entered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11 to 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- I. In claim 11, lines 9 and 10, the meaning of the phrase, "which is converted into B on a number of atoms basis when its mass percentage is calculated" is not

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clear. Does this mean that in converting from atom % to weight % C atoms are treated as if they are B, that is, using the molecular weight of B in the conversion?

II. In claims 12 and 18, line 2, the meaning of "no accumulated phases of Q" is not clear. Does this mean that there are no carbides or borides in the claimed magnet?

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11 to 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Yamamoto et al. (Yamamoto '875, US Patent Application Publication No. 2002/0007875, cited in the IDS submitted February 7, 2006), Japanese Publication No. 2002-075717 (Japan '717, cited in the IDS submitted February 7, 2006) or Nishizawa et al. (Nishizawa '899, US Patent Publication No. 2004/0177899, cited by the Examiner).

Each of the references teaches a zirconium containing rare earth-transition metal-boron alloy and a sintered zirconium containing rare earth-transition metal-boron magnet having a composition that overlaps the alloy and sintered product compositions recited in applicants' claims (Yamamoto '875, page 3, paragraph 0043; Japan '717, machine translation, paragraph 0020 and Nishizawa '899, page 2, paragraph 0019).

Each of the references also teaches specific example composition that with the exception of the boron content are encompassed by the instant claims (Yamamoto '875, Examples 1 and 2, and Figures 1 to 3 and 5 to 7; Japan '717, machine translation, Example 1, paragraph 0035; and Nishizawa '899, the examples in Figure 12). The boron contents in each of these cited examples are 1 wt% and 1.1 wt% in the case of Yamamoto '875 (Examples 1 and 2) and Japan '717 (machine translation, paragraphs 0035 and 0040) and 1 wt% in the case of Nishizawa (Figure 12, each of the Examples). Each of these exemplified boron contents, 1 and 1.1 wt% boron closely approximate the upper boron content of 0.98 wt% recited in the instant claims.

The references and the claims differ in that references do not teach the exact same proportions as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy proportions taught by each of the references overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

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Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Further, in view of the fact that the specific example compositions cited in this rejection differ only in the boron content and the claimed upper B content of 0.98 wt% closely approximates the specific cited examples containing 1 and 1.1 wt% B, one of ordinary skill in the art would have expected the alloys taught by the references and the instantly claimed compositions to have the same properties. See *in re Peterson*, 65 USPQ2d 1379, 1382, citing *Titanium Metals Corp. v. Banner*, 227 USPQ 773, 779 and MPEP 2144.05.

“a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed.Cir.1985)(Court held as proper a rejection of a claim directed to an alloy of “having 0.8%nickel,0.3% molybdenum, up to 0.1%iron, balance titanium ” as obvious over a reference disclosing alloys of 0.75%nickel,0.25% molybdenum, balance titanium and 0.94%nickel,0.31% molybdenum, balance titanium.).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (7:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Sheehan/
Primary Examiner
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JPS